Rock Island Arsenal
Storehouse K
(Building 56)
North Avenue and East Avenue
Rock Island
Rock Island County
Illinois

HAER No. IL-20-H

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
Department of the Interior
Washington, D.C. 20013-7127

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HISTORIC AMERICAN ENGINEERING SURVEY

ROCK ISLAND ARSENAL
STOREHOUSE K
(Building 56)
HAER No. IL-20L

Location: North Avenue and East Avenue,
Rock Island Arsenal,
Rock Island,
Rock Island County, Illinois
UTM: 15.705120.4599160
Quad: Davenport East

Date of Construction: 1887-1893

Present Owner and Occupant: U.S. Army

Present Use: CIassroom and office space for U.S. Army Management Engineering Training Activity (AMETA)

Significance: After taking command of Rock Island Arsenal in 1865, General Thomas Jefferson Rodman devised a master plan for the installation calling for the construction of ten, stone Greek revival manufacturing shops, five on each side of the island's major east-west thoroughfare. To the rear of each shop, there was to be a massive stone storehouse of the same architectural style. Only two of these stone storehouses were constructed, and Storehouse K is the sole surviver. With its companion facilities completed under the Rodman plan, Storehouse K forms a choesive architectural statement, which, in terms of both scale and style, has no counterpart among government installations in the Midwest.

In addition to their architectural importance, the Rodman plan buildings are the administrative and technological core of Rock Island Arsenal, one of onIy two "old-line," nineteentch-century arsenals still in operation for munitions production. The buildings are vital for understanding the history of American ordnance development and manufacture from the Spanish American War to the present. Storehouse K is part of the Rock Island Arsenal National Register Historic District.

Historian: Jeffrey A. Hess, February 1985

Architectural Historian: David Arbogast, February 1985

PART I. HISTORICAL INFORMATION

A. Physical History:

1. Date of erection: Excavation work began in August 1887 (Sommer, p. 14). By July 1890, the stone work had been completed for the first and second stories, and for about two-thirds of the third story ("Report, 1890," p. 130). By July 1891, the third-story stone work had been completed and the roof finished ("Report, 1891," p. 120). By July 1892, "doors, window frames and sashes, with locks and fastenings, [had been] put in and painted; wooden ceiling put up and oiled; floors laid; iron stairs erected; retaining wall, with coping, sandstone steps and platforms on south and east sides completed; concrete basement and the ramps on east side laid" ("Report, 1892," pp. 399-400). In 1893, the building was completed (Nothstein and Stephens, p. 188).

2. Architect: Unknown. Plans were probably prepared by Ordnance Department staff under the supervision of Colonel Thomas G. Baylor, who assumed command of the arsenal in June 1886 (Stephens and Nothstein, p. 177).

3. Original and subsequent owners: U.S. Army.

4. Builder, contractor, suppliers: "Much of the manufacturing effort at the arsenal before the Spanish-American War concentrated on construction of the buildings. The rolling mill [in Shop F] produced most of the roof trusses. . . . The foundry [in Shop E] and machine shop [in Shop C] made much of the machinery and building hardware such as the locks and stairways. The carpenter shop [in Shop C] made the window frames. Contract labor did some of the work while civilian employees and soldiers did other portions of the job" (Bouilly, p. 125).

5. Original plans and construction: No original elevations have been located. The Rock Island Arsenal Engineering Plans and Services Division has microfiche reproductions of the following six original drawings: "Plan Showing Pilasters on Inner Portico-Wall Corner for Support of Floor Girders and Triple Skewback for Roof, 1889 (R30000534); "Basement Floor Plan," 1886 (R30000535); "Wooden Girders for Storehouse K," n.d. (R30000540); "Column and Corbel for Basement," 1886 (R30000541); "Column and Corbel for First and Second Stories," 1886 (R30000542); "Cast Iron Shoe for Wooden Floor Joists, Basement", 1888 (R30000533).

The earliest known view documenting the building's construction is a photograph, dated 1941, in the picture collection of the Rock Island Arsenal Historical Office. It is captioned, "25-4434

April 18, 1941 / Building No. 56 Storehouse 'K,' looking north-east" (see HAER Photo No. IL-20L-10). The building's present configuration conforms to the 1941 photograph. Physical inspection shows no evidence of significant exterior remodeling, although many original doors and sash have been replaced. The original open floor plan has been partitioned into offices and classrooms.

6. Alterations and additions: After 1941, a covered loading dock was added to the west facade of the west wing; this addition was removed after 1961 (Sommer, pp. 16, 18). In 1975-1976, the original open interior space was partitioned into classrooms and offices (Sommer, pp. 16-17).

B. Historical Context:

After taking command of Rock Island Arsenal in 1865, General Thomas Jefferson Rodman devised a master plan for the installation calling for the construction of ten, stone, Greek revival, manufacturing shops, five on each side of the island's major east-west thoroughfare. To the rear of each shop, there was to be a massive stone storehouse of the same architectural style. Only two of the proposed storehouses were erected (Nothstein and Stephens, p. 178). The first, known as Storehouse A, was completed in 1885 ("Report, 1885," p. 621), and it served as an architectural model for Storehouse K, which was constructed during 1887-1893 (Sommer, p. 16). After Storehouse A was destroyed by fire in 1903, Storehouse K became the sole surviving structure of its type built under the Rodman plan (Sommer, p. 14). The building was used for storage until 1975, when it was remodeled into office and classroom space for the Army Management Engineering Training Activity (AMETA) (Sommer, pp. 16-17). It has been designated as "Building 56" at least since 1941 (see HAER Photo No. IL-20L-10; for additional documentation, see HAER No. IL-20).

Prepared by: Jeffrey A. Hess
MacDonald and Mack Partnership
February 1985

PART II. ARCHITECTURAL INFORMATION

A. General Statement:

1. Architectural character: The building is a massive, lste Greek Revival style,rectangular-plan, limestone building. It is two-and-one-half stories above a basement, with a gabled roof covering an attic. The imposing size and quality of the building are somewhat diminished by its location bebind the stone shop buildings.

2. Condition of fabric: The building is well-maintained and is in good condition.

B. Description of Exterior:

1. Overall dimensions: Tbe building measures 234' (15 bays) x 60' (3 bays) with 60' (3 bays) x 15' (1 bay) projecting pavilions centered on the north and south elevations.

2. Foundations: Coursed, rock-faced ashlar limestone measuring 3'-10" thick below a dressed ashlar limestone water table.

3. Walls: Coursed, rock-faced ashlar limestone (HAER Photo Nos. IL-20L-1, IL-20L-2, and IL-20L-3) decreasing in thickness by 6" with each story. Colossal rock-faced ashlar limestone pilasters (HAER Photo Nos. IL-20L-1, IL-20L-2, and IL-20L-3) rising from the water table to the entablature divide the elevations into a regular bay system. The north and south elevations and psvilion side bays each contain a single window opening in their bays, but tbe east and west elevations and the pavilion faces have wider bays with two window openings in each. The dressed limestone entablature (HAER Photo Nos. IL-20L-1, IL-20L-2, and IL-20L-3) carries a projecting dressed limestone cornice. Tbe pedimented gable ends (HAER Photo Nos. IL-20L-1, IL-20L-2, and IL-20L-3) are rock-faced ashlar limestone with dressed limestone cornices.

4. Structural systems: Brick bearing wsll with rock-faced ashlar limestone veneer. Cast-iron columns are placed 20' on-center in the basement, first, and second floors. The basement columns (HAER Photo No. IL-20L-9) are heavy, Tuscan columns with square entablature blocks having triangular panelled brackets supporting the beams on their east and west sides. The columns of the first snd second floors (HAER Photo No. IL-20L-5) are fluted, Doric columns with square entsblature blocks having scrolled brackets supporting the beams on their east and west sides. First, second, and attic floor systems are sawn timber beams and sawn wood joists. The roof system is iron Fink trusses (HAER Photo Nos. IL-20L-6 and IL-20L-7).

5. Porches: Large porches (HAER Photo Nos. IL-20L-1, IL-20L-2, and IL-20L-3) are located across the pavilion ends and small porches (HAER Photo No. IL-20L-1) are centered in the east and west ends. Each large porch has a platform reached by concrete steps at their east and west ends. The outside of the porches has a pipe railing painted black. Each small porch has a limestone platform on a rock-faced ashlar limestone base wall and is reached by limestone block steps at their north and south sides. They also have black pipe railings. Running from the attic level to the ground on the west elevation is a steel fire escape (HAER Photo No. IL-20L-2) painted tan. Narrow window wells with rock-faced ashlar limestone walls front each set of basement windows.

6. Openings:

   a. Doorways: Principal first-floor doorways (HAER Photo Nos. IL-20L-1, IL-20L-2, and IL-20L-3) are centered in the east and west elevations and located at all three bays of the pavilion faces. Each has a rock-faced limestone segmental-arched head with a rock-faced keystone, rock-faced limestone jambs, and limestone sill blocks which have been mostly replaced with poured concrete sills. All of the pavilion doorways have had their doors removed and the openings filled with stucco except for a modern glass door in a raw aluminum frame in the west doorway of the south pavilion. The east and west doorways each contain a pair of modern glass doors in raw aluminum frames, as well. The east and west elevations of the pavilions at the basement level contain doorways with limestone openings matching the first-floor doorways. The north basement doorways contain modern overhead doors, but the two south doorways retain their original doors. These are double-leaf doors in the segmental-arched openings. Each leaf has four, vertical, beaded, tongue-and-groove board panels. On the second floor of the west elevation, the north window opening in the center bay has been lengthened to contain a modern slab door for the fire escape. Above it, the two center attic window openings have been removed and the opening enlarged to accommodate a similar slab door for the fire eacape.

   b. Windows: Typical basement, first-, and second-floor window openings (HAER Photo Nos. IL-20L-1, IL-20L-2, and IL-20L-3) have rock-faced limestone jambs, cut limestone sills and flat lintels. The basement window lintels are formed by the water table. Pairs of window openings (HAER Photo Nos. IL-20L-1, IL-20L-2, and IL-020L-3) above the principal first-floor doorways have segmental-arched rock-faced limestone voussoirs and keystones. Typical sash are six-over-six, double-hung, wood, dating from the original construction with modern aluminum interior storm sash in the first- and second-floor window ope-

nings. The attic window openings (HAER Photo Nos. IL-20L-1, IL-20L-2, and IL-20L-3) are typically arranged in pairs of small openings in the building entablature with sets of four centered over the arched pairs of windows in the gable ends. These window openings have rock-faced jambs and sills and lintels formed by the entablature and frieze. They contain single-light, pivoting, wood sash (HAER Photo No. IL-20L-8). The attic gable ends contain pairs of window openings (HAER Pboto Nos. IL-20L-1, IL-20L-2, and IL-20L-3) with rock-faced limestone jambs, segmental-arched, rock-faced limestone arches and keystones and dressed limestone sills. The south snd north walls of the basement pavilion elevations have window openings containing two-over-two, double-hung, wood sash. All wood sash are painted white.

7. Roof:

   a. Shape, covering: The roof (HAER Photo Nos, IL-20L-1 and IL-20L-2) is a cross-gable form covered with asphalt shingles.

   b. Cornice, eaves: The projecting cornice and eaves (HAER Photo Nos. IL-20L-1, IL-20L-2, and IL-20L-3) are dressed limestone. The interior metal gutter system is tied to exterior metal leaders which lead to an underground drainage system.

C. Description of Interior:

1. Floor plans: The building was originally a warehouse and contained no major interior partitions. It bas since undergone numerous remodelings resulting in its present total use for classroom functions. Most interior partitions date from the past decade and remodeling is currently underway on the second floor snd in the attic. There is a freigbt elevator in the center of the building and modern restrooms are randomly located on the basement, first, and second floors.

   a. Basement: The basement is an open-plan storage area with a small cafeteria area and a few enclosed rooms.

   b. First and second floors: Tbe first and second floors have center-hall plans with classrooms and some offices.

   c. Attic: The attic is an open-plan area with a full wall between the east end and the center. An enclosed mechanical room extends north of the freight elevator.

2. Stairways: There are three interior stairways serving the building. In the southeast corner of the building is a stair running between the first and second floors. A similar stair running from

the baaement to the second floor is located in the southwest corner of the building. Theae are U-plan stairs with intermediate landinga. Of modern steel construction, they have aquare ateel rods supporting varnisbed wood handraila. In the soutbwest corner of the south pavilion is the original staircase (HAER Photo No. IL-20L-4) of the building. It is a U-plan stair with intermediate landings rising from the basement to the attic. Originally open, it is now enclosed and has decorative, cast-iron, pierced stringers and risers and open, decorative, cast-iron railing supports. Tbe newels are ornate, square, wood posts with stop-chamfered corners and turned, wood tops supporting wooden spheres. The landings are covered with varnished hardwood flooring. The handrails are molded, varnished wood. The flight to the basement has been replaced with a straight-run, modern, steel stair enclosed on both sides and having pipe railings attached to each side wall.

3. Flooring: Basement flooring is poured concrete (HAER Photo No. IL-20L-9) with a sealer applied to it. The first and second floors have wood flooring covered with linoleum tile (HAER Photo No. IL-20L-5). The attic has wood flooring with a clear varnish finish (HAER Photo No. IL-20L-6). Along the center of the attic floor is a set of steel plates forming a track.

4. Wall and ceiling finishes: Outer basement walls are painted, rock-faced, ashlar limestone. The columns (HAER Pboto No. IL-20L-9) are exposed and painted. Interior partition walls are painted gypsum board, unpainted concrete block, and demountable partitions. The ceiling (HAER Photo No. IL-20L-9) is exposed wood beams, joists and subflooring of the first floor, except at the east end where tbere is a suspended acoustical tile ceiling.

   Outer first-floor walls are painted gypsum board and painted brick. The cast-iron columns are encased with square-plan, painted gypsum board. Partition walls include painted gypsum board and modern wood panelling. The ceiling is suspended acoustical tile.

   The second-floor outer walla are painted gypsum board and painted brick. The columns are encased in aquare-plan, painted gypsum board except for two in the center (HAER Photo No. IL-20L-5) which are exposed and painted. Tbe interior walls (HAER Photo No. IL-20L-5) are painted gypsum board and the classrooms have a plain, varnished, wood chair rail at the window sill level. The ceiling is suspended acoustical tile except for a small area in the center hallway (HAER Photo No. IL-20L-5), which is varnished, beaded, tongue-and-groove, board ceiling dating from the original conatruction.

The outer attic walls (HAER Photo Nos. IL-20L-6 and IL-20L-8) are painted brick. The major dividing wall is horizontal, beaded, tongue-and-groove boards. The freight elevator and mechanical room in the center have painted gypsum board walls (HAER Photo IL-20L-6). The ceiling (HAER IL-20L Photo Nos. IL-20L-6 and IL-20L-7) is the wood decking and rafters and purlins of the roof.

5. Openings:

   a. Doorways and doors: No original doorways survive. Thus, all doorways are of relatively recent vintage appropriate to their respective partitions.

   b. Window: Window openings have been encased with modern, painted gypsum board at the first- and second-floor levels to match the adjacent walls. Basement and attic window openings (HAER Photo No. IL-20L-8) formed by the adjacent brick and limestone.

6. Hardware: Original hardware survives on the two original basement doors. Each leaf has three, heavy, cast-brass, plate hinges and each pair has an elaborate, cast-brass bead bolt. Surviving original window hardware includes sash cords, pulleys, weights, and ornate lifts.

7. Mechanical equipment:

   a. Heating, air conditioning, ventilation: The building is heated by steam pipes (HAER Photo Nos. IL-20-6 and IL-20-8) and radiators from a central heating plant (Building 227). A modern air conditioning and ventilation system is in the process of being installed.

   b. Lighting: Artificial illumination is by means of fluorescent electrical fixtures with some incandescent fixtures in the attic (HAER Photo Nos. IL-20L-6 and IL-20L-7). No evidence remains of original artificial lighting systems.

   c. Plumbing: No original plumbing fixtures survive.

   d. Elevators: The original freight elevator survives in the center of the building, in a modernized condition.

D. Site:

1. General setting and orientation: The building anchors the northwest corner of the intersection of North Avenue and East Avenue. Directly south, across North Avenue, is Building 68, a small arms assembly plant. North and east, across East Avenue, is Building

90, a U.S. Army management engineering training activity building. The relatively level site slopes gently to the north.

Prepared by: David Arbogast
Architectural Conservator
February 1985

PART III. SOURCES OF INFORMATION

A. Original Architectural Drawings:

The Rock Island Arsenal Facilities Engineer's office has microfiche reproductions of the following six original drawings for interior construction:

"Storehouse K / Plan Showing Pilasters on Inner Portico-Wall Corner for support of Floor Girders & Triple Skewback for Roof," March 20, 1889, (R30000531).

"Storehouse K / Basement Floor Plan," September 6, 1886 (R30000535).

"Wooden Girders for Storehouse K," n.d. (R30000540).

"Storehouse K / Column and Corbel for Basement," November 30, 1886 (R30000541).

"Store House K / Column & Corbel for First and Second Stories," December 13, 1886 (R30000542).

"Cast Iron Shoe for Wooden Floor Joists (Basement), Storehouse K," April 12, 1888 (R30000533).

B. Early Views:

The earliest known view is a 1941 photograph in the picture collection of the Rock Island Arsenal Historical Office. It shows the building in its present configuration. It is captioned, "25-4434 April 18, 1941 / Building No. 56 Storehouse 'K,' looking north-east" (see HAER Photo No. IL-20L-10).

C. Bibliography:

1. Primary and unpublished sources:

Hess, Jeffrey A., and Mack, Robert C. "Historic Properties Report Rock Island Arsenal, Rock Island, Illinois". Prepared by MacDonald and Mack Partnership, and Building Technology Incorporated for the Historic American Buildings

Survey/Historic American Engineering Record, National Park Service, U.S. Department of the Interior, 1985. The report, with accompanying inventory cards, is filed as field records in the Prints and Photographs Division, Library of Congress, under HAER No. IL-20.

Real Property Cards, Rock Island Arsenal Engineering Plans and Services Division. Briefly describes building's structural characteristics and provides sketchy history of maintenance operations.

2. Secondary and published sources:

Bouilly, Robert. "Arsenal Island." Joined by a River: Quad Cities, ed. Frederick I. Anderson. N. pl.: Lee Enterprises, Incorporated, 1982. Excellent historical analysis of the arsenal's development to about 1910, written by a historian in the Rock Island Arsenal Historical Office.

Nothstein, Ira O. and Stephens, Clifford W. A History of Rock Island Arsenal from Earliest Times to 1954. Rock Island: U.S. Army, Rock Island Arsenal, 1965. 3 vols. Rock Island Arsenal Historical Office. The best account of the arsenal's general operations; gives completion date for building.

"Report of the Chief of Ordnance, 1885." House Documents, vol. 2374. Washington, D.C.: Government Printing Office, 1885. Gives completion date for the original Storehouse A.

"Report of the Chief of Ordnance, 1890." House Documents, vol. 2836. Washington, D.C.: Covernment Printing Office, 1890. Briefly describes construction progress.

"Report of the Chief of Ordnance, 1891." House Documents, vol. 2928. Washington, D.C.: Government Printing Office, 1891. Briefly describes construction progress.

"Report of the Chief of Ordnance, 1892." House Documents, vol. 3083. Washington, D.C.: Government Printing Office, 1892. Birefly describes construction progress.

Sommer, Sheryl K. The Home of U.S. Army Management Engineering Training Activity (Rock Island Arsenal, 1981). Rock Island Arsenal Historical Office. Provides most detailed discussion of building's construction and use.

D. Likely Sources Not Yet Investigated:

Record Group 156 at the National Archives contains correspondence on the construction and operation of Rock Island Arsenal from 1871 to 1903. This material is also available on 216 reels of microfilm at the Browning Museum, Rock Island Arsenal.

PART IV. PROJECT INFORMATION

This project was part of a program initiated through a memorandum of agreement between the National Park Service and the U.S. Department of the Army. Stanley J. Fried, Chief, Real Estate Branch of Heaquarters DARCOM, and Dr. Robert J. Kapsch, Chief of the Historic American Buildings Survey/Historic American Engineering Record, were program directors. Sally Kress Tompkins of HABS/HAER was program manager, and Robie S. Lange of HABS/HAER was project manager. Building Technology Incorporated, Silver Spring, Maryland, under the direction of William A. Brenner, acted as primary contractor, and MacDonald and Mack Partnership, Minneapolis, was a major subcontractor. The project included a survey of historic properties at Rock Island Arsenal, as well as preparation of an historic properties report and HABS/HAER documentation for 38 buildings. The survey, report, and documentation were completed by Jeffrey A. Hess, historian, Minneapolis; Barbara E. Hightower, historian, Minneapolis; David Arbogast, architectural historian, Iowa City, Iowa; and Robert C. Mack, architect, Minneapolis. The photographs were taken by Robert A. Ryan, J Ceronie, and Bruce A. Harms of Dennett, Muessig, Ryan, and Associates, Ltd., Iowa City, Iowa. Drawings were produced by John Palmer Low, Minneapolis.